

VII.—CAUSE OF SORE NECK IN SAMBAR.

A circular bare and hairless patch on the throat of sambar has been the subject of controversy going on from 1921 under the caption 'Sore Neck in Sambar' in the *Journal* of the Bombay Natural History Society and readers of this valuable *Journal* owe the editors a debt of gratitude for allowing many sportsmen and writers to express their own views.

In this connection a note appeared in the *Journal* of the Natural History Society of Siam under the signature of Mr. P. R. Kemp. It was referred to in Volume xxxvii, No. 4, Misc. Note No. viii of the Bombay Natural History Society's *Journal* for the first time in 1921.

Although this subject is discussed in *Shikar Books* and in subsequent issues of the *Journal* of the Bombay Natural History Society in recent times, yet this phenomenon seems to have been observed for the first time, as early as 1890 by Mr. W. S. Thom (vide his interesting article in the *Journal* of the Bombay Natural History Society, Vol. xxxix, No. 2).

Before coming to the real cause for 'Sore Neck', it would not be out of place to summarise the opinion of various writers and tribes who live in forests where sambar abound. Mr. Kemp was told by the Siamese that this 'Sore Neck' is the leprosy of the Sambar and it is caused by the animal eating the fruit of the Ma-Kawk tree known as the wild olive or plum. The matter was referred to Mr. Dunbar Brander, I.F.S., who writes that he always observed this mark or sore during the period when hair and horn are undergoing a change. He naturally connected the two and came to the conclusion that the sore was the result of the changes taking place. He qualifies his remarks and states that this is merely his suggestion.

On reading the above notes, Lieut. R. A. H. McConnel states that while shooting in the Southern Province of Ceylon, he encountered a sambar hind which was incapable of movement. On examination he found that the under part of the neck was covered with festering sores. The hind was otherwise in fair condition and, as the sore was superficial, Lieut. McConnel supports the theory of disease. Here it may be mentioned that the sore neck due to a change in horn does not explain the phenomenon. (Vol. xxviii, No. 4, Misc. Note No. v, *Journal* of the Bombay Natural History Society.)

Then in Vol. xxviii, No. 2, Note No. ii appears the note from Mr. J. H. Hutton (now Dr. Hutton) with reference to 'Sore Neck'. He was told by Nagas that it is due to the animals perpetually rubbing themselves to get rid of ticks. Dr. Hutton adds that ticks certainly attack the necks of sambar but suggests that it may possibly be the result rather than the cause.

A further reference was made to the Honorary Secretary, Bombay Natural History Society through Mr. Blackburn and he very kindly supplied me with a reference to 'Sore Neck' in Mr.

Dunbar Brander's book *Wild Animals in Central India*. The author says that—

'In parts of India, especially towards Assam, Sambar have often been observed to have a curious sore bare patch or spot on the base of the neck. The cause is not known: it has been suggested that it is the manifestation of some disease. The phenomenon is not common in the Central Provinces, and I have only noticed it late in the hot weather or at the commencement of the rains. At this season of course Sambar are subject to little intelligent observation so it is possible that these spots exist more frequently than we are aware of. Occurring as they do in the region of a hair whorl or centre, and at a time when rapid moult is taking place, I have associated the phenomenon as being in some way connected with the new growth of hair. When Sambar change their coats they often do so in large tufts, the old hair coming away in sections before the new hair has developed. During this stage they have a very ragged appearance.'

In the publication of 15th April, 1937 of the Bombay Natural History Society's *Journal* (Vol. xxxix, No. 2) a very interesting article on this subject appears. This is 'The Malayan or Burmese Sambar' by Mr. W. S. Thom. In this article Mr. Thom not only explains his own theory and observation but adds the experience of other sportsmen and observers. At the instance of Mr. Thom, tubes were supplied by Mr. Mitchell to Mr. Mustill, the Game Warden, Burma to collect some of the exudation from the sore of the sambar, so that Mr. Mitchell may be in a position to make an attempt to diagnose the disease, if disease it is. Mr. Thom thinks that if the sore or circular patch on the sambar's neck is not the result of a parasite or a secretory gland such as is found in elephants, camels, black buck etc., then it may be the result of bites by ticks and the intense irritation set up by the animals pushing their way through elephant grass and under growth. Mr. Thom suggests that plants like *Mucuna pruriens* whose pods are clothed with intensely irritating bristles, stinging nettles and the fine hairs of the bamboo set up irritation, and he adds that when sambar push their way through grass and tick-infested jungle, the animals hold their heads well up and these insects then find the throat and neck the most convenient spot on which to gather. Mr. Thom writes that he has been told that 'Sore Neck' has been seen on the necks of brow-antlered deer and in one instance, on the neck of a barking deer.

Captain S. R. Rippon informs Mr. Thom that skin on the bare patch on the tame sambar's neck appeared to be quite normal, i.e., there was no sign of any parasitic disease to the naked eye nor did it appear as if the hair had been lost by rubbing. Captain Rippon thinks that the bare patch is probably a normal characteristic of the species and he doubts whether the sores are due to rubbing. He states also that it certainly would seem to be too much of a coincidence to find only this area on the neck affected in the way in every case, ticks must be found on other parts of the body.

Mr. Thom gives further very interesting facts from Major C. P.

Evans' book *Big Game Shooting in Upper Burma*. This is quoted below :—

'Major C. P. Evans in his book *Big Game Shooting in Upper Burma* has a lot to say on the subject of the sambar sore, *vide* pp. 144-48 of his book, but I will only quote a few extracts. He says that the Burman and Indian Shikaris state that the sambar is attacked by a parasite (I doubt whether they could explain what a parasite was) and that the sore is caused by the animal rubbing itself to get relief from the irritation. This he says no doubt is true so far as it goes; but they are quite unable to explain why sambar should invariably be attacked in exactly the same place or why the sore should be as circular as if it were made by a pair of compasses, and why sambar alone of all deer should be so afflicted. But are sambar the only deer so afflicted. Haven't black buck in India got it? Evans goes on to say that he does not himself believe in the rubbing theory. If the beast rubbed itself against a tree or branch to get rid of the irritation it would do so with an up and down motion and the result would be irregular scratches along the throat. But strange to say in spite of the forbidding appearance of the sore sambar do not appear to be at all inconvenienced by it. Evans says that he has watched sambar, when out in the open both in India and Burma for half an hour or more at a time, on purpose to see whether the animals rubbed the sore; but he never saw any sambar whether young or old pay the slightest attention to it. That the disfigurement is caused by a peculiar parasite which only attacks the sambar is according to Evans quite certain; but why it should invariably confine its attentions to the throat, or why it should cause a complete circular sore and, having done so, desist from further attack he is unable to explain. Judging by the bleeding spot in the centre of the circle it looks, according to Evans, as if the parasite having reached its limits, returned to the original spot and fed there, since it is, in full-grown animals, always quite raw, the remainder of the circle being merely bare and pink-looking. Seen in the early dawn this raw spot has quite a gruesome appearance.'

The writer of this article has seen several sambar at close quarters during the course of 20 years of his roamings in the jungle, but has never seen a single specimen of sambar with a 'Sore Neck' and never attempted to wait and watch for sambar as Major Evans did.

Though there are several sportsmen and scientists in the field, seeking to *unravel* the mystery of this phenomenon, for the last 20 years, the writer had an uncommon bit of good luck to read a passage in a small book which explains the cause of 'Sore Neck' in such a manner that it leaves no room for any doubt.

The fact of the matter is, our jungle friend the sambar although sometimes described as 'Monarch of the Dale' does not carry 'blue blood' in its veins. He has much humbler origin than people think. This 'Sore Neck' is nothing but a badge of inferiority complex which sambar and other higher forms of animals carry round their necks to remind them for all time, that they were

once marine animals. When the Himalayas were under water, these animals including sambar perhaps were swimming in the shallow sea.

In the biological language, 'Sore Neck' in sambar is an insistence of 'Atavistic Degeneracy', i.e., a return to an ancestral type. What we see as a bare patch and a sore on the neck of the animals used to be a place where gills were attached when these animals were leading a marine life. The disease is called 'Cervical Fistula'. I recommend the readers to study Mr. B. Lindsay's book *The Story of Animal Life*. I now quote the relevant passage from this book.

'Nor do we need to go into the nursery to find links with our inferiors. Much, indeed far too much, has been written of late years about "atavistic degeneracy"; that is to say degeneracy which imitates the characteristics of our forefathers. Many things which are classed as diseases, whether of the body, mind, or moral nature, may be explained in this way. Take the gills, which, as we have stated, exist in all vertebrates, but not in the adult of the highest groups. In a sickly individual, even among the highest vertebrates, traces of these are sometimes seen existing in the adult, as a gap or open space in the neck called by the medical man "cervical fistula": this is an instance of degeneracy in the body. Take, for another instance, the kleptomaniac, who snatches up everything he takes—a degeneracy of the mind, a relic of savage nature out of place in civilised man. Yet the gill-space is an ancestral feature which has its right time to appear though it is out of place in the adult; and the "want-to-snatch" stage, as we have already seen, is quite natural in the young child.'

To understand clearly the development, position, and modification of 'gills' in the modern animal, I quote another passage from Mr. Lindsay's book.

'The classes of the Vertebrata are Fishes, Amphibia, Reptiles, Birds and Mammals. We used to learn that of these, fishes had gills, and Amphibia gills for a time; but, to be strictly accurate, we must say that fishes have gills, and all the rest of Vertebrata have gills for a time. There is no exception to this rule, not even among the highest vertebrates. But in those vertebrates which stand higher in the scale of life than Amphibia, viz., Reptiles, Birds and Mammals, these gills are never brought into use. They only exist in the early embryo, and afterwards disappear, giving rise by their modification to other structures.

'Strange to say, one of these structures is the ear. This takes its origin from one of the gill-"clefts" or spaces. The Eustachian tube, which communicates between ear and nose, is part of this cleft; and the little bones which are inside the ear represent the bones of the gill-cleft. For, in fishes, bones support each gill, and are connected together to form a complex arrangement. In the higher vertebrates, which possess gills only in the embryo, this gill-skeleton is much modified, and persists as a bone, the hyoid bone, supporting the tongue.

'The gills of vertebrates, arranged in successive pairs along the throat, are "perforating gills"; that is to say, they consist

essentially of holes or spaces which pass right through the wall of the throat.'

JAGDALPUR,

S. R. DAVER.

BASTAR STATE.

October 7, 1937.

VIII.—SOME BIRDS OBSERVED IN KUTCH AND KATHIAWAR.

From the ornithological point of view Kutch appears to be one of the least known of our Indian provinces, and Lester's *Birds of Kutch* is the only reference work to it that I can trace. A few notes jotted down during two short week-end visits (mid-June, 1936 and mid-August 1937) may be of interest.

At Bedi Bunder in Kathiawar, a curlew was seen on 12th June. Lester cites a local sailor to the effect that curlew breed on the islands in the Gulf. At Rozi Bunder (also on the Kathiawar side), curlew and whimbrel were both common on the 16th June. Again in mid-August this year, both species were plentiful in the mangrove swamps around Kundla. Judging from the arrival and departure of these birds round Bombay, however, my notes alone would not justify a belief in the breeding of these birds in India. Further information on this point would be interesting.

At the Hemisa Tank in the heart of Bhuj, I saw a solitary drake cotton teal (*Nettapus coromandelicus*) in full plumage.

This is apparently the first record of this bird in the State. Subsequent to this I learnt from Prince Fatehsinghji of Kutch (who is taking a keen interest in birds) that two more had been obtained at a recent shoot and their identity confirmed in Bombay.

I was also fortunate enough to meet during my short visit, a pair of those rare and elusive birds, the white-winged black tits (*Parus nuchalis*) on a scrub-covered hill-side. Unfortunately I had no occasion to add anything to our knowledge of this little-known bird.

Other birds seen, apparently rare in Kutch (vide Lester) were the two Jacanas (*Metopidius* and *Hydrophasianus*) both of which were common at the Hemisa Tank in June. The Crow-pheasant (*Centropus sinensis*), which Lester particularly notes as absent in Kutch, was seen at Jamnagar, just across the Creek.

ANDHERI, SALSETTE,

HUMAYUN ALI.

BOMBAY.

December 15, 1937.

IX.—DRUMMING OF WOODPECKERS.

Anyone who lives in or near the jungles of this continent is familiar with the peculiar rat-a-tat or drumming on dead trees, a performance so often heard but not so often seen. I have the good fortune to have a vocation which permits of a study of bird